REMARKS

Favorable reconsideration of this application in light of the following remarks is respectfully requested.

Rejection under 35 U.S.C. §102

Claims 1-20 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,064,872 (Vice). Independent claim 1 is directed at a passive field effect transistor mixer that includes, in part, a transistor pair and a balun having a primary and secondary winding. The primary winding is coupled to a radio frequency signal input. The secondary winding is coupled at one side to one of the source and the drain of the first transistor, while the other side of the secondary winding is coupled to one of the source and the drain of the second transistor. An intermediate frequency signal output is coupled to a point in the circuit path between the first and second transistors.

In contrast, Vice discloses a mixer that includes a transformer 75 having a primary winding 75a and a secondary winding 75b (see Vice at Fig. 9, shown below). The primary winding 75a of the transformer 75 in Vice is coupled to a Local Oscillator (LO). The secondary winding 75b of the transformer 75 is connected to a transistor pair 63, the transistor pair 63 further coupled to both a radio frequency signal input 72 and an intermediate frequency signal output 73. Thus, the transformer 63 in Vice acts as a LO balun, and not an RF balun (see Vice at col. 5, line 62 to col. 6, line 3, and col. 9, lines 59-62).

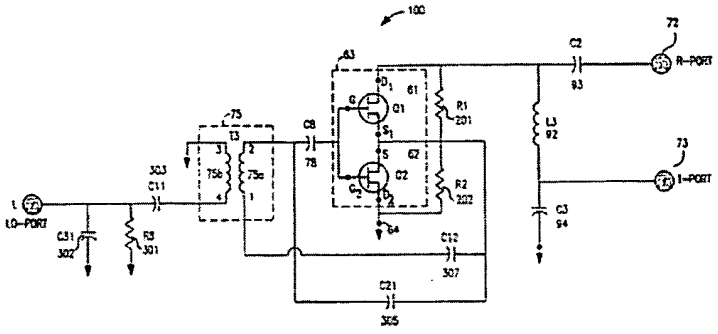


FIG. 9

(From Vice)

This is very different from the mixer of claim 1, which requires that the primary winding is coupled to the radio frequency signal input, while the secondary winding is coupled to the transistor pair, the transistor pair further coupled to the intermediate frequency signal. (see the subject application at Fig. 7, shown below). Thus, the transformer in claim 1 acts as an RF balun, unlike the LO balun disclosed by Vice.

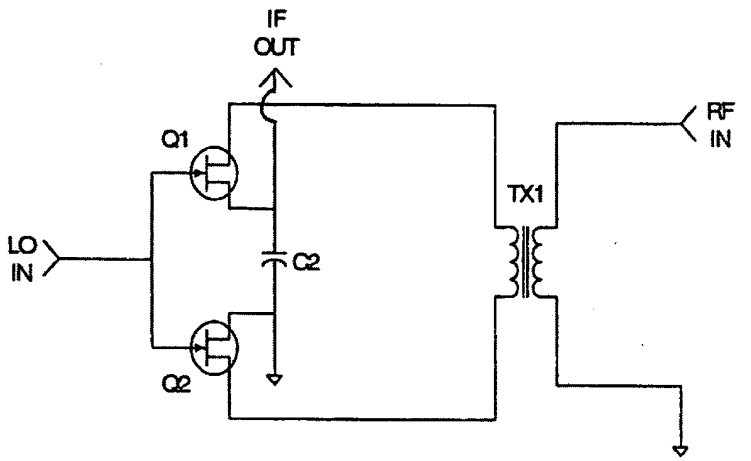


Figure 7

(From Subject Application)

Additionally, Vice discloses that one end of the secondary winding 75b is coupled to the common source terminals S and S1 of the transistor-pair 63, while the other end 75a of the secondary winding is coupled to the common gates G and G2 of the transistor pair (see Fig. 9 of Vice, shown above). This is very different from claim 1, which requires that one side of the secondary winding is coupled to one of the source and drain of the first of the two transistors, and that the other side of the secondary winding is coupled to one of the source and drain of the second transistor.

Since Vice does not teach every element of amended independent claim 1, claim 1, as amended, is not anticipated under 35 U.S.C. §102(e) by Vice and is allowable. Dependent claims 2-7 depend on and incorporate independent claim 1, and are allowable for the same reasons as discussed above with regard to claim 1, and are further allowable in view of the additional limitations set forth therein.

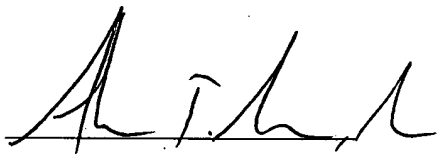
Independent claims 8 and 15 require, in various forms, applying a radio frequency signal to a primary winding of a transformer of a balun. Thus, the balun in claims 8 and 15 act as an RF balun. This is different from the LO balun disclosed by Vice, as discussed above with regard to claim 1. Accordingly, claims 8 and 15 are not anticipated under 35 U.S.C. §102(e) by Vice and are allowable. Claims 9-14 and 16-20 which depend on and incorporate claims 8 and 15 respectively, are allowable for the same reasons as discussed above with regard to claims 8 and 15, and are further allowable in view of the additional limitations set forth therein.

It is believed that the application is now in order for allowance and Applicant respectfully request that a notice of allowance be issued. If any extension is required, applicant hereby petitions for same and requests that any extension or other fee required may be charged to deposit account number 19-4972.

If the Examiner has any questions as to the allowability of the currently pending claims or if there are any defects which need to be corrected, the Examiner is invited to speak to the Applicant's counsel at the telephone number given below.

DATE: February 12, 2004

Respectfully submitted,



Alexander J. Smolenski, Jr.
Registration No. 47,953
Attorney for Applicant

Bromberg & Sunstein LLP
125 Summer Street
Boston, MA 02110-1618
(617) 443-9292

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